



Where Has All The Talent Gone?

The impact of an aging workforce
in public transit, and what to do
about it.

BOMBARDIER

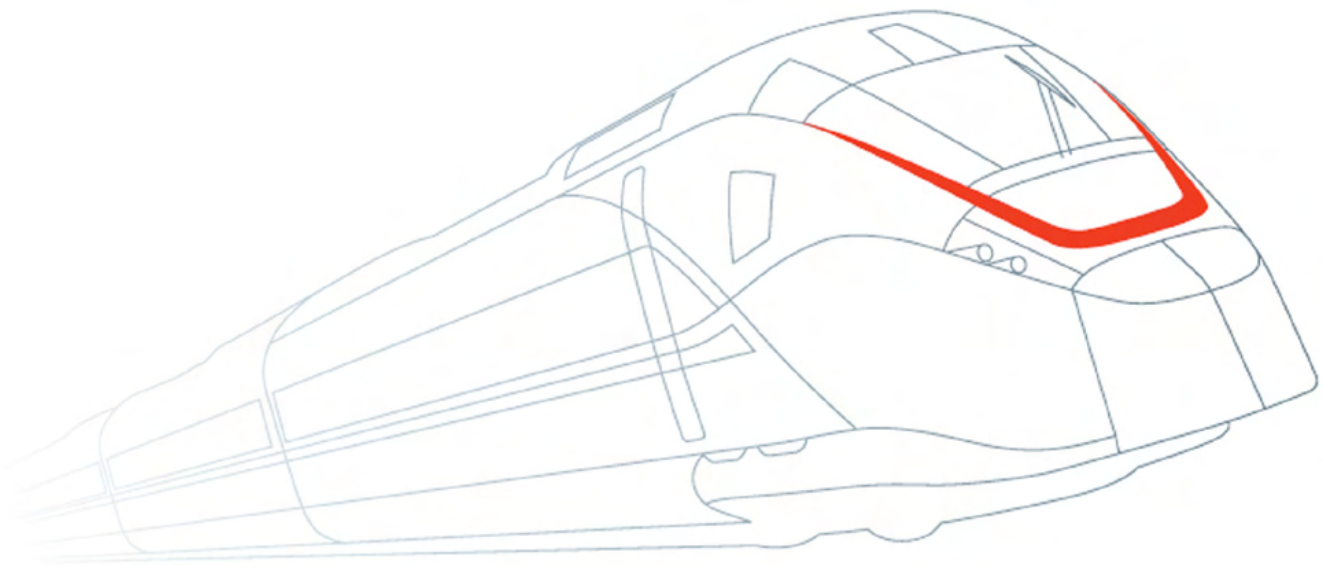
“In your career, knowledge is like milk. It has a shelf life stamped right on the carton. The shelf life of a degree in engineering is about 3 years. If you’re not replacing everything you know by then, your career is going to turn sour fast.”¹

Louis Ross, Chief Technical Officer
Ford Motor Company

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“An organization’s ability to learn, and translate that learning into action rapidly, is the ultimate competitive advantage”

Jack Welch

“The U.S. will face a shortage of 10 Million workers by 2010”

Bersin + Associates

FORWARD

This paper is designed to present you with information that will assist you in understanding the workforce challenges facing our industry, the value of investing in training and development of your people, and how e-learning can be a powerful component of your workforce development program.

INTRODUCTION

Transit employment levels have historically been affected by two major events in US history. Firstly, mass transit grew at tremendous levels during and after World War II. Fuel and other resources were scarce, women began to play a prominent role in the workplace, and automobiles were not as prevalent as they are today. The second major event was the creation of the Urban Mass Transit Administration in 1964. This marked the entry of the United States Department of Transportation into funding mass transit in the United States.

It was this second event that impacts us today as we see the transportation workers that were hired in the late 1970's and early 1980's now headed for retirement in the tens of thousands. Coupled with aging “Baby Boomers”, this exodus of talent and experience cannot be replaced easily, and the need for quality training programs has never been more critical than it is today.

Training and workforce development is viewed by many, outside of the training department, as an expense as opposed to an investment. As budgets shrink, and demand for transit service grows, the amount of money that we invest in new hires is directly proportional to what their output will be. We expect them to be safe, to do their jobs efficiently, and to follow the laws and regulations that govern our industry. If we give them a three day general orientation and two weeks of On The Job Training (OJT) training can we expect great results? This is highly unlikely and should be a call to action for all of us to look at how we recruit, how we train, and how we continually develop the talents of our people.

Beyond simply equipping our people with the right tools and capabilities to do their jobs, we also must ensure that we have solid governance in our organizations and that we are meeting, and exceeding, the regulatory requirements placed on us by local, state and federal statutes. Training is one area that is immediately reviewed when disaster strikes, be it a passenger injury, a workplace incident, or other regulatory compliance issue. Regulators want to know if the employee received the training, when they received their training, and records

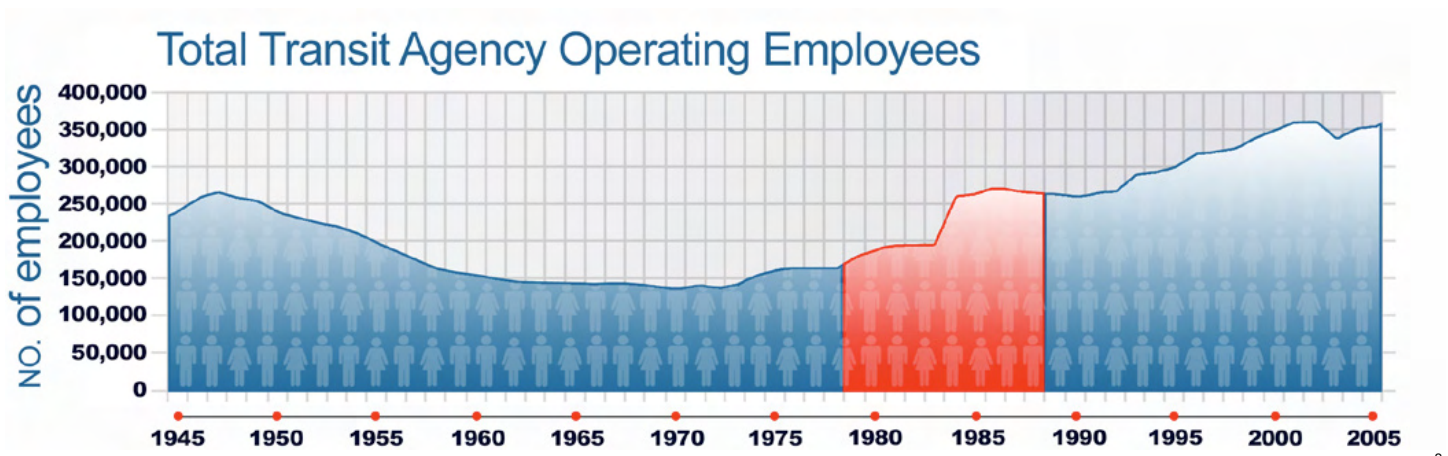
that document what they were taught and proof that they were tested to ensure that they retained the knowledge. Every Learning Management System must have this information available on demand.

While we acknowledge that no training is free, there are ways to maximize your investment and reach your objectives faster. There is no magical solution that will address all of your workforce development needs, however this paper looks at the benefits of Computer Based Training, or e-Learning, as one element of a solid workforce development program.

TRAINING IN A TRANSIT PERSPECTIVE

Mass transit was largely a private enterprise throughout North America until 1964 when the US Government created the Urban Mass Transit Administration (now the Federal Transit Administration). This meant that federal funds were now available to invest in public transit systems, move more people, and hire more staff. Employment levels in the US public transportation industry grew from 165,000 in 1978 to 265,000 in 1988, a 62% increase in ten short years.

The table below shows historic employment levels in public transportation in the U.S., with those hired between 1978 and 1988 being highlighted. It is this segment of the transit workforce that is now retiring over the next five to ten years.



This growth in employment levels was fueled by investment which will only continue as we face increased demand for public transportation. Fuel prices are at record levels and the environmental benefits of transit are changing the driving habits of millions of people. In short, our industry is in need of qualified, technically competent people more than ever, yet we are facing the largest exodus of talent that we have ever seen in this industry.

While all transit agencies do their very best to welcome new hires and give them every opportunity for success, many obstacles have prevented us from providing the type of workforce development tools that we would want or need. Training is not usually a highly visible department in many organizations; the impacts of not training someone are not easily quantified and usually not seen (unless a major incident occurs). Also, employees are typically not vocal in announcing that they do not have the skills to do what we expect of them – this is especially true of new hires that have not passed their probationary period!



In 2007, U.S. companies and organizations spent \$58.5 billion on training (including payroll and training budgets) with \$16.3 billion earmarked for external training products and services.

Training Magazine's 2007 Industry Report

WHY CHANGE MUST TAKE PLACE AND QUICKLY

The labor pool is shrinking in the Public Transportation Industry and its technology is getting more complex. Most vehicle systems are now computer controlled, customer expectations are increasing and technology is advancing in every aspect of our jobs on a daily basis.

*"Every seven seconds, a Baby Boomer turns 60. Because of this, the United States faces a significant challenge in meeting demands for workers in the next several years."*³

While there is certainly a cost in training all staff, new hires bring an additional financial burden. Having said that, a training program that is inadequate, or under-funded, brings new risks and additional costs that are more difficult to quantify. These may include:

- Overtime and other additional labor costs as the work may not be able to be completed in a normal shift due to a lack of training and experience.
- Consequential costs of work not being performed correctly – this might include equipment failures disrupting passenger service, customer complaints, and potentially regulatory fines and/or litigation should the failure of the employee have catastrophic results.

It is simply not acceptable for senior managers in our industry to believe that the workforce development plan can be the same today as it was twenty years ago – the needs of the workforce are different, technology has changed and the investment required is based on the needs of the business and not based on what was spent on training in 1988. The risks of an under-trained workforce in the public transit industry are far too great to hope that they will learn the required skills "on the job".



Bersin & Associates, a leading HR research organization, has compiled numerous reports that indicate what the future holds:

- The 500 largest companies in America will lose 50% of their senior management in five years
- The average same employer tenure for US employees is three years; for 18 – 24 year olds it is 18 months
- Training departments identified three areas where they are least effective;
 - i) aligning with HR
 - ii) allocating budget based on business impact
 - iii) accurate measurement

Ultimately, we need to recognize that there is an urgent need to invest in quality training and workforce development programs, and the costs of not doing so are real and significant.

THE OBSTACLES TO THE TRAINING MANAGER IN THE TRANSIT ORGANIZATION

In order to build an organization with a “learning culture” it is important to recognize the obstacles, or bottlenecks, that training organizations encounter.

In public transit it usually centers on three main challenges:

- A lack of quality training material, or course content
- Subject Matter Experts (SMEs) are either the busiest people in the organization or they have already retired
- Inadequate tools (and funding) to manage and deploy training

Training material is usually developed when new equipment, software or processes are implemented. We rely on the vendors of these solutions and manuals that may not address the requirements of the employee that use the equipment or tools. When resources are not available to continually refine the material, training staff make do with what they have.



The Subject Matter Experts (SME) are usually in demand and they have no time to assist in building training content. A reality at most Transit Authorities is that they can't "pull the people from the floor" to provide training. It is a common refrain that the "busiest people get the most work". The irony is that the one of the reasons the SMEs are so busy is that they are answering questions from the new hires all day long!

The other misconception is that the person with the most knowledge on a particular subject is best suited to be the instructor or the publisher of training material. Training people is a craft that is not easily obtained; producing the material requires technical writing and graphic imaging skills that the SME may never possess.

The delivery of training has also changed. With hosted training solutions you are now able to revise training "on the fly", ensuring that all employees will receive the latest course offerings.

Regulatory Compliance and reporting have become major requirements, meaning that it is not good enough to simply train the people, but also be able to document what training they received, when they received it, when the qualification for the task expires, etc. It is also worth noting that On The Job Training (OJT) is acceptable as a training tool, but it is also a highly recommended practice (and often required by law) to record the OJT program. What areas were covered on OJT? Did the student grasp the concepts and did they demonstrate the necessary capabilities to perform the work? It is not good enough to pair the new employee up with the twenty year veteran and assume that they got it right!

WHAT IS AN LMS AND WHY DO I NEED ONE?

An effective Learning Management System (LMS) offers a wide variety of functionalities that are far beyond conventional training record management. An LMS delivers, tracks and manages training. In many instances, the LMS is web-based, therefore accessible from the office, the shop floor or even from home.

Record keeping is automated with each course completed resulting in full compliance with all regulations and providing enhanced governance.

Leading LMS solutions also provide features that allow for continuous improvement of the training. When test scores indicate that a majority of students



failed to answer a particular question correctly you are able to drill down and review the course material and make it more easily understood, or improve the test questions to avoid ambiguity.

E-mail alerts can be sent to supervisory staff providing well planned training requirements thereby improving course attendance with minimal disruption to the business.

Also, all knowledge (procedures, processes, schematics, etc) can be contained in one medium, considerably reducing the time spent by employees to search for information. Imagine the impact if you could cut in half the number of questions that new hires asked established employees over their first five years of service?

Reduction of Training Costs

With training content online, multiple users can access it at the same time without having to pay the travel fees, instructor salaries and meeting room rentals usually required by classroom training. Furthermore, Web-based e-Learning reduces the amount of time required to complete training modules, therefore reducing the time spent away from the job by employees. In addition to those savings, "e-Learning courses progress up to 50 percent faster than traditional courses" according to an article by Jennifer Salopek in Training and Development Magazine. She explains that "This is partly because the individualized approach allows learners to skip material they already know and understand and move onto the issues they need training on."⁴

Calgary Transit recently implemented a hosted e-Learning solution and reduced training time by 63%, effectively training their Light Rail Vehicle mechanics in nine months as opposed to the twenty-four months previously required.⁵ The e-Learning platform allowed for improved retention of knowledge, a self-paced learning environment and technical data that is now stored in a highly accessible environment. Previously, new hires were spending 15-20% of their time looking for information (experts, books, schematics, etc.).



A branch of the U.S. military estimated that their technicians' ability to diagnose faults with helicopters increased by 90 percent after the adoption of multimedia training. Over a period of five years, they expect at least a 20-fold return on their investment (Jerram, 1994).

Compliance and Reporting

An effective LMS manages training workflow with user notifications, manager approvals and scheduling. Furthermore, LMS facilitates compliance procedures by guiding the certification process and managing re-certification dates for individuals. Compliance reporting and verification processes are therefore made easier by the LMS.

A Railroad Operator would thus be able to maintain records and prove its compliance to the FRA (or OSHA, State DOT, etc.) in a mouse click. Each employee's profile can be accessed to ensure all required certifications are successfully completed. Also, automatic e-mails are sent to employees and their manager when a new or re-certification is approaching expiry and upon course completion.

Training Accuracy and Consistency

When training is given in more than one location, or by more than one instructor, it can be difficult to ensure that instruction is provided in a consistent manner each and every time. Web-based e-Learning eliminates the variability of instructor-led training by having the same training materials available to all users of the system, no matter where they are.

Due to the importance of public safety and security, regulations in the public transportation industry are comprehensive and rightly so. Processes and procedures must be followed to ensure that the quality of the work completed is in accordance with specific work instructions and federal, state and local laws. For example, a wheel inspection on a rail car is a critical maintenance activity in the Public Transportation Industry and the consequences of a poor inspection can be dramatic. e-Learning ensures that the training every employee receives is consistent, no matter where or when it takes place.

Powerful LMS features make the implementation, hosting, tracking, testing, auditing and administration of online courses a seamless process. The automation of assessing and certifying learning results provide enhanced governance and, often times, replaces poorly organized files handled by individual instructors.

On-Demand Availability

As every Transit Training Manager knows, it is often impossible to get 100% attendance on an instructor-led course. Whether it be a heavy vacation period, bad weather, or a host of operational issues that cause people to cancel at the last minute, it is difficult to pull people from their daily work responsibilities to provide classroom training.

A hosted LMS with high-availability architecture ensures multiple users will be able to securely connect via a broadband connection anywhere, anytime. Transit is a three shift world and e-Learning makes it easier to cover all employees on a schedule that meets their needs, and the needs of their Supervisors.

How Can e-Learning Help the Transfer of Knowledge in the Railroad Industry?

In the years to come, the public transportation industry will face a high level of employee turnover as its aging workforce enters retirement. According to a report recently published by the Federal Railroad Administration (FRA), approximately 50,000 of the 258,929 employees of US railroads had 30 or more years of experience in 2004.⁶

What is Driving e-Learning



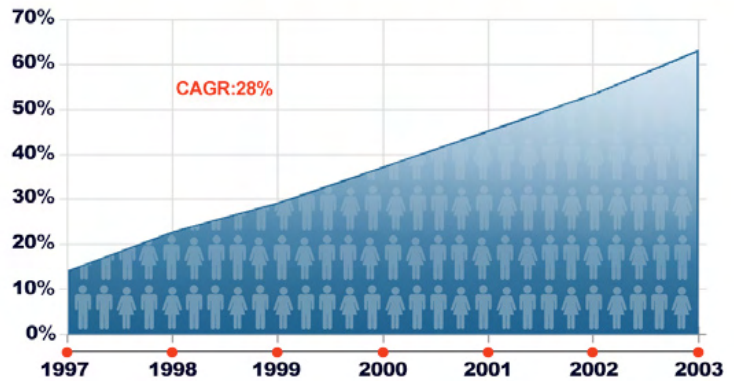
U.S. Department of Labor, Bureau of Labor Statistics

If, like many Transit Authorities, you do not have high quality training programs, and technical information accessible to all, you will face the challenge of transferring that knowledge from 30 year veterans to the twenty something's that will be walking in the front door just starting their transit career.

Some view e-Learning as a challenge based on the perception that not all new hires are comfortable with computers. What is important to recognize is that we need to direct training technology to what our students feel comfortable with, and not what we grew up with. While almost all of us use some form of computer in our personal or professional life (from Blackberrys and Instant Messaging to complex software to maintain trains), the people that will be joining our workforce have no idea what life was like before the 286 chip, or Microsoft, or "Pong" for that matter.



Internet User Growth as a Percentage of Total U.S. Population



Sources: International Data Corporation, U.S. Census Bureau, and WR Hambrecht + Co estimates

The other consideration is that if your organization is hiring new employees with no computer skills, there may be a problem that you are creating for your business in the years ahead. Our technology is challenging today – we need to build teams that can face the next twenty and thirty years ahead!

E-Learning can facilitate the creation of a consistent training package by gathering the knowledge to be transferred from the experts and creating standardized online modules. This process will allow you to capture the knowledge, but more importantly, allow you to sustain it and provide the skills necessary for years to come.

CONCLUSION

While we have presented information that shows the value of e-Learning and Learning Management Systems, there is no one individual solution that will address all of the challenges that you may face in building a more capable team. At the end of the day, your organization needs to find the best people that want to contribute to the success of public transit. What is indisputable is that every Transit Authority must continually invest in their people if we are to move people more safely, more efficiently, and provide a transportation alternative that the public prefers over the automobile.

In every transit organization we know that we are losing experienced people at a record pace. Ask yourself the question, “what are we doing about it?” If you cannot name three strong initiatives that are in effect at your Transit Authority to deal with the “retirement surge” you need to draw a line in the sand.



We encourage you to look at how an LMS can improve the foundation of your learning organization. From increasing the accessibility of knowledge, to improved quality of the course content, and reporting compliance tools, an LMS should be part of every transit organization's workforce development plan. One thing is certain; you must act now. None of us want to wake up a year or two from now and say "where has all the talent gone?"



- 1 - Louis Ross, Ford Motor Co., CTO to a group of engineering students
- 2 - 2008 PUBLIC TRANSPORTATION FACT BOOK PART 2: HISTORICAL TABLES, APTA, June 2008
- 3 - Report of the Taskforce on the Aging of the American Workforce, February 2008
- 4 - Jennifer Salopek, Training and Development Magazine
- 5 - Xpan Interactive
- 6 - FRA, An Examination of employee recruitment and retention in the US railroad industry, August 2007, p.8

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